

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

What is claimed is:

Claim 1. (previously presented) Method for producing a contact structure on a structured surface of a substrate, the method comprising:

producing a first conductive layer on the structured surface, the first conductive layer comprising tungsten;

producing a conductive seed layer on the first layer, the seed layer comprising a multiple-layer structure;

electroplating the contact structure on the seed layer; and

selectively removing the contact structure, at least one of the layers of the multiple-layer structure of the seed layer acting as a stop layer in the selective removal.

Claim 2. (original) Method as claimed in claim 1, wherein at least a sublayer of the first conductive layer is produced by means of CVD deposition.

Claim 3. (original) Method as claimed in claim 1, wherein the substrate includes a semiconductor substrate.

Claim 4. (original) Method as claimed in claim 3, wherein the semiconductor substrate is a silicon substrate.

Claim 5. (original) Method as claimed in claim 1, wherein the structured surface is a surface of an opening in the substrate.

Claim 6. (original) Method as claimed in claim 5, wherein the opening at least in one direction comprises an aspect ratio of greater than or equal to 1:4.

Claim 7. (original) Method as claimed in claim 5, wherein the opening extends into the substrate in the vertical direction at a depth of greater than or equal to 20 nm.

Claim 8. (canceled)

Claim 9. (currently amended) Method as claimed in ~~claim 8~~ claim 1, wherein the seed layer comprises a multiple-layer structure, one or several layers of same comprising a metallic barrier material.

Claim 10. (original) Method as claimed in claim 9, wherein the multiple- layer structure of the seed layer includes a stack comprising barrier metals.

Claim 11. (original) Method as claimed in claim 10, wherein the barrier metals are selected from the group comprising Ta, TaN, Ti, TiN and TiW.

Claim 12. (canceled)

Claim 13. (original) Method as claimed in claim 1, which further includes selectively removing the contact structure, the first conductive layer acting as a stop layer in the selective removal.

Claim 14. (original) Method as claimed in claim 1, wherein the first conductive layer comprises a multiple-layer structure.

Claim 15. (original) Method as claimed in claim 14, wherein the multiple- layer structure of the first conductive layer includes one or multiple metallic barrier layers.

Claim 16. (original) Method as claimed in claim 14, wherein the multiple- layer structure includes an insulating layer which may consist of a multiple stack of insulating layers.

Claim 17. (original) Method as claimed in claim 1, wherein the first conductive layer comprises at least one layer which consists only of tungsten or tungsten alloy.

Claim 18. (original) Method as claimed in ~~any of~~ claims 1, which further includes the step of selectively removing material from the reverse side of the substrate, the first conductive layer representing a stop layer in the selective removal.

Claim 19. (original) Method as claimed in claim 18, wherein the first conductive layer comprises a multiple,-layer structure, at least one of the layers of the multiple-layer structure representing a stop layer for the selective removal of the material of the substrate.

Claim 20. (original) Method as claimed in claim 18, wherein the selective removal includes wet chemical etching.

Claim 21. (original) Method as claimed in claim 1, wherein the structured surface is a surface of a via hole which extends to a re- verse side of the substrate in the vertical direction from a front side of the substrate, the method further including the step of a reverse-side removal of material of the substrate.

Claim 22. (original) Method as claimed in claim 21, wherein the reverse- side removal of material of the substrate includes etching, wherein the first conductive layer represents a stop layer.

Claim 23. (original) Method as claimed in claim 22, wherein, after the selective removal of the material of the substrate, chemical-mechanical polishing is performed, whereby the contact structure is exposed on the reverse side, and a via structure is formed.

Claim 24. (original) Method as claimed in claim 23, wherein a conductive connecting layer is deposited on the whole area of the reverse side of the substrate after the reverse side of the contact structure has been exposed.

Claim 25. (original) Method as claimed in claim 23 wherein bumps are formed on the reverse side for electrically connecting the contact structure.

Claim 26 (previously presented) Method for producing a contact structure on a structured surface of a substrate, the method comprising:

producing a first conductive layer on the structured surface, the first conductive layer having a multiple-layer structure including a layer comprising tungsten and a barrier layer;

producing a conductive seed layer on the first conductive layer;

electroplating the contact structure on the seed layer; and

selectively removing material from the reverse side of the substrate, at least one of the layers of the multiple-layer structure of the conductive layer representing a stop layer in the selective removal.

Claim 27 (new) Method for producing a contact structure on a structured surface of a substrate, the method comprising:

producing a first conductive layer comprising a multiple-layer structure on the structured surface, the first conductive layer comprising tungsten, the multiple layer structure including an insulating layer which may comprise a multiple stack of insulating layers;

producing a conductive seed layer on the first layer; and

electroplating the contact structure on the seed layer.